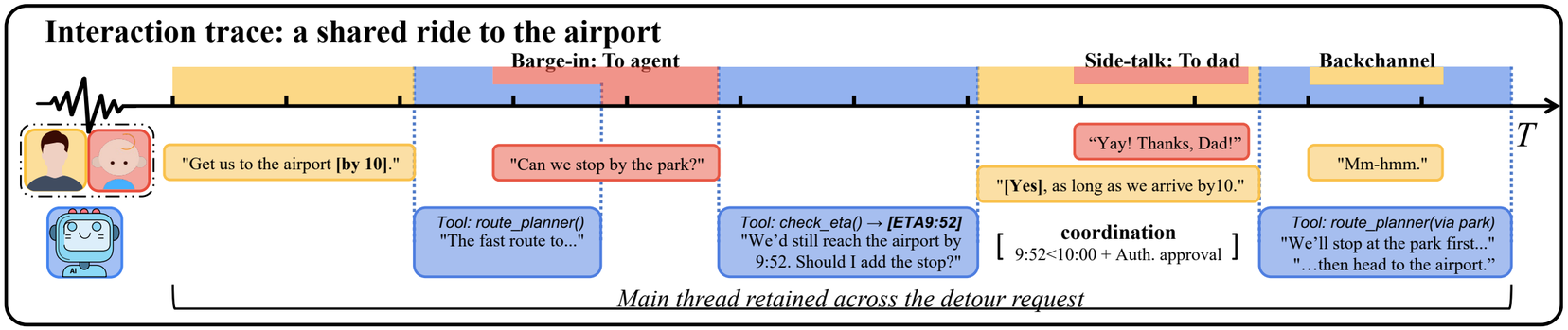
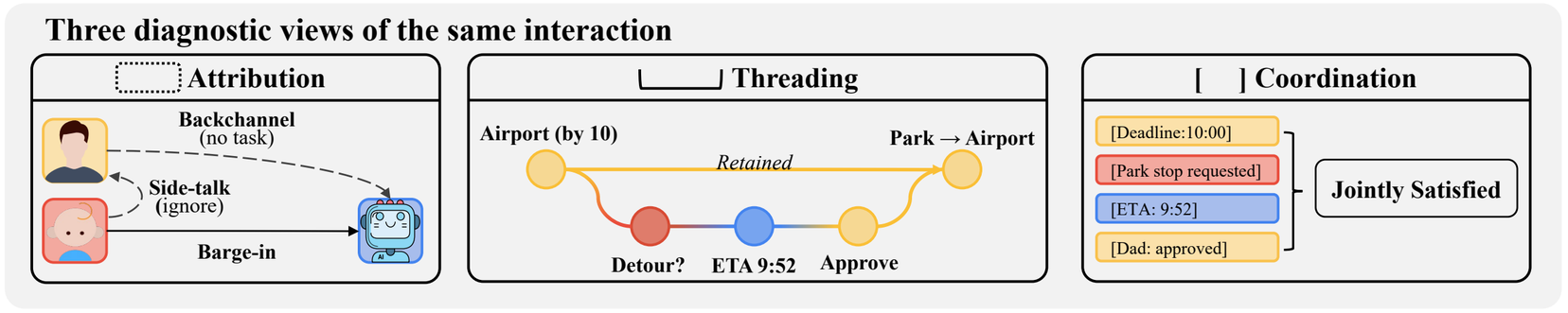
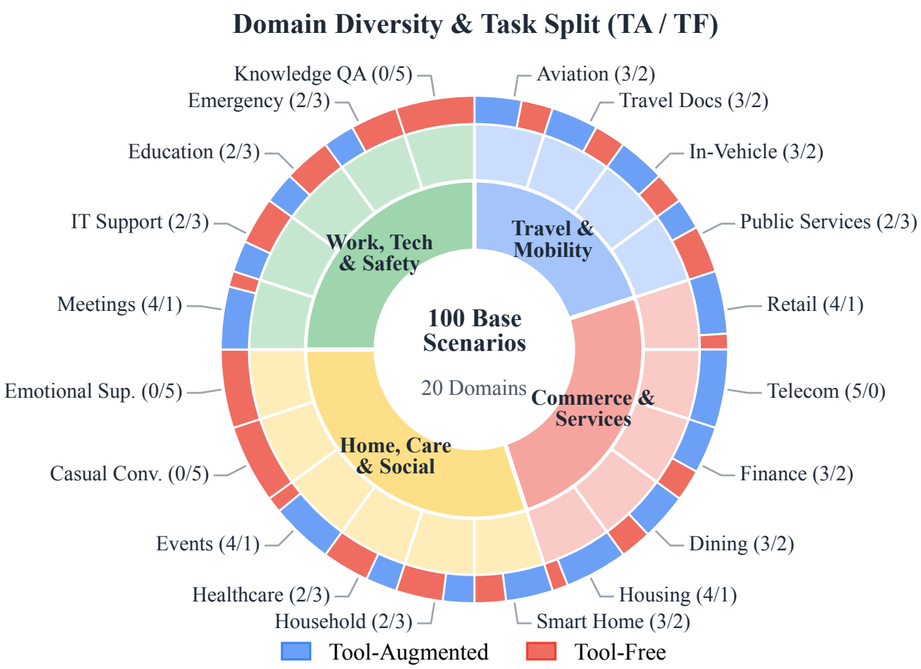

Interaction trace: a shared ride to the airport
Barge-in: To agent
Side-talk: To dad
Backchannel
T
"Get us to the airport [by 10]."
"Can we stop by the park?"
"Yay! Thanks, Dad!"
"[Yes], as long as we arrive by10."
"Mm-hmm."
Tool: route_planner()
"The fast route to..."
Tool: check_eta() → [ETA9:52]
"We'd still reach the airport by 9:52. Should I add the stop?"
[coordination
9:52<10:00 + Auth. approval]
Tool: route_planner(via park)
"We'll stop at the park first..."
"…then head to the airport."
Main thread retained across the detour request


Three diagnostic views of the same interaction
Attribution
Backchannel
(no task)
Side-talk
(ignore)
Barge-in
Threading
Airport (by 10)
Park → Airport
Retained
Detour?
ETA 9:52
Approve
[ ] Coordination
[Deadline:10:00]
[Park stop requested]
[ETA: 9:52]
[Dad: approved]
Jointly Satisfied


Domain Diversity & Task Split (TA / TF)
Knowledge QA (0/5)
Emergency (2/3)
Education (2/3)
IT Support (2/3)
Meetings (4/1)
Emotional Sup. (0/5)
Casual Conv. (0/5)
Events (4/1)
Healthcare (2/3)
Household (2/3)
Aviation (3/2)
Travel Docs (3/2)
In-Vehicle (3/2)
Public Services (2/3)
Retail (4/1)
Telecom (5/0)
Finance (3/2)
Dining (3/2)
Housing (4/1)
Smart Home (3/2)
Work, Tech & Safety
Travel & Mobility
100 Base Scenarios
20 Domains
Commerce & Services
Home, Care & Social
Tool-Augmented
Tool-Free